

**Work Order ID 58767**

May 18, 2010 1:44:42 PM



Page 1

Item ID: D3121-143

Accept



Setup Start



Revision ID:

Stop



Item Name: Bracket Assembly

Start Date: 5/18/10 Start Qty: 10.00



Cust Item ID:

Required Date: 5/28/10 Req'd Qty: 10.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D3121

Rev E

100

0.00



BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blanks: (1.250" x 2.000") 4.425" long

MUE 10/05/19

10 0

110

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine D3121-113 as per Folio FA330 and Dwg D3121  
Identify as D3121-113  
2-Deburr  
3-Scribe batch number

H.A 10/05/22

10 0

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

H.A 10/05/22

10 0

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

**Work Order ID 58767**

May 18, 2010 1:44:43 PM



Page 2

Item ID: D3121-143

Revision ID:

Item Name: Bracket Assembly

Start Date: 5/18/10

Start Qty: 10.00

Required Date: 5/28/10

Req'd Qty: 10.00

Reference:

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130



QC

Quality Control

QC8- Inspect parts - second check

0.00

Memo

0.00

enl 10/05/29

10

0

140



Small Fab

Small Fab

Small Fab

Memo

Assemble D3121-143 as per Dwg D3121.

0.00

0.00

EP 10/05/25 (10)

150



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Sulorlar

(10)

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

**Work Order ID 58767**

May 18, 2010 1:44:43 PM



Page 3

Item ID: D3121-143

Accept



Setup Start



Revision ID:

Stop



Item Name: Bracket Assembly

Start Date: 5/18/10

Start Qty: 10.00



Cust Item ID:

Required Date: 5/28/10

Req'd Qty: 10.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160



Packaging

Packaging

Identify as per dwg & Stock Location: 235A

0.00

Memo

0.00

10-5-26 7028

170



QC

Quality Control

QC21 - Final Inspection - Work Order Release

0.00

Memo

0.00

10/05/26 7028

CL 10/5/26

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                                |                                 |                |                           |                       |                          |
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| DATE | STEP | Description of NC<br>Section A   | Corrective Action<br>Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng           | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

May 18, 2010 1:44:42 PM

Page 1

Work Order ID: 58767

Parent Item: D3121-143

Parent Item Name: Bracket Assembly




Comments: IPP Rev: Pick: A ☐ 04.02.18 ☐ New issue ☐ KJ/DS ☐  
 IPP Rev: B ECN 1060 07-11-12 DD verified by: EC  
 IPP Rev: C New Dimensions for Blank Size 08-07-23 JLM Verified By: EC

Start Date: 5/18/10

Required Date: 5/28/10

Start Qty: 10.00

Required Qty: 10.00

| Component Item ID/   | Replacement | Mfg/         | Bin | Primary | Last | Route | Unit of | Qty on  | Qty per Kit | Qty | Date | Status |
|--|-------------|--------------|-----|---------|------|-------|---------|---------|-------------|-----|------|--------|
| D3121-21   |             | Manufactured | No  |         |      | 140   | Each    | 23.0000 | 2           |     |      |        |
|   |             |              |     |         |      |       |         |         |             |     |      |        |
| Bolt   |             |              |     |         |      |       |         |         |             |     |      |        |
| <div> <div>Location</div> <div>ST235</div> <div>57376</div> </div> <div> <div>Loc Qty</div> <div>23</div> <div>23</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> </div>  |             |              |     |         |      |       |         |         |             |     |      |        |
| D3121-241  |             | Manufactured | No  |         |      | 140   | Each    | 42.0000 | 2           |     |      |        |
|   |             |              |     |         |      |       |         |         |             |     |      |        |
| Bearing Assembly   |             |              |     |         |      |       |         |         |             |     |      |        |
| <div> <div>Location</div> <div>ST235B</div> <div>55005</div> <div>56419</div> </div> <div> <div>Loc Qty</div> <div>42</div> <div>2</div> <div>40</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> <div></div> </div> |             |              |     |         |      |       |         |         |             |     |      |        |
| M174B1.250X02.000  |             | Purchased    | No  |         |      | 100   | f       | 14.7894 | 0.368       |     |      |        |
|   |             |              |     |         |      |       |         |         |             |     |      |        |
| 17-4 SS Bar 1.250 x 2.00   |             |              |     |         |      |       |         |         |             |     |      |        |
| <div> <div>Location</div> <div>MAT031</div> <div>113568</div> </div> <div> <div>Loc Qty</div> <div>14.7894</div> <div>14.7894</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> </div>                                |             |              |     |         |      |       |         |         |             |     |      |        |



EP 10/05/25

20x



EP 10/05/25  
 1558765 (20x)



ME  
 10/05/19

3.8919

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



|                                     |  |                     |                  |
|-------------------------------------|--|---------------------|------------------|
| <b>DART AEROSPACE LTD</b>           |  | <b>Work Order:</b>  | <b>58767</b>     |
| <b>Description: Bracket</b>         |  | <b>Part Number:</b> | <b>D3121-113</b> |
| <b>Inspection Dwg: D3121 Rev: E</b> |  | <b>Page 1 of 2</b>  |                  |

### FIRST ARTICLE INSPECTION CHECKLIST

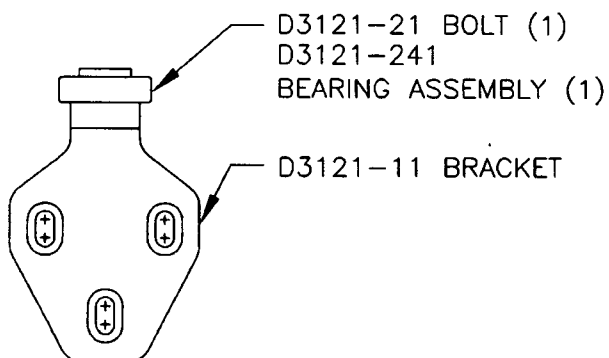
☒ First Article
 ☐ Prototype

| Drawing Dimension | Tolerance     | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| 0.080             | +/-0.010      | 0.082            | ✓      |        |                      |          |
| 0.300             | +/-0.010      | 0.302            | ✓      |        |                      |          |
| R0.375            | +/-0.010      | R0.375           | ✓      |        |                      |          |
| 1.54              | +/-0.030      | 1.541            | ✓      |        |                      |          |
| 0.350             | +/-0.010      | 0.351            | ✓      |        |                      |          |
| R0.25             | +/-0.030      | R0.250           | ✓      |        |                      |          |
| Ø0.392            | +0.002/-0.000 | Ø0.393           | ✓      |        |                      |          |
| Ø0.201            | +0.005/-0.000 | Ø0.201           | ✓      |        |                      |          |
|                   |               |                  |        |        |                      |          |
| 2.540             | +/-0.010      | 2.540            | ✓      |        |                      |          |
| 1.590             | +/-0.010      | 1.590            | ✓      |        |                      |          |
| 0.160             | +/-0.010      | 0.160            | ✓      |        |                      |          |
| 0.400             | +/-0.010      | 0.398            | ✓      |        |                      |          |
| 1.220             | +/-0.010      | 1.218            | ✓      |        |                      |          |
| 1.600             | +/-0.010      | 1.604            | ✓      |        |                      |          |
| 3.80              | +/-0.030      | 3.800            | ✓      |        |                      |          |
| 1.800             | +/-0.010      | 1.802            | ✓      |        |                      |          |
| R0.50             | +/-0.030      | R0.500           | ✓      |        |                      |          |
| 0.130             | +/-0.010      | 0.130            | ✓      |        |                      |          |
| 3.41              | +/-0.030      | 3.410            | ✓      |        |                      |          |
| 3.65              | +/-0.030      | 3.625            | ✓      |        |                      |          |
| 2.24              | +/-0.030      | 2.220            | ✓      |        |                      |          |
| 45°               | +/-0.1°       | 45°              | ✓      |        |                      |          |
| R0.25             | +/-0.030      | R0.250           | ✓      |        |                      |          |
| 3.97              | +/-0.030      | 3.970            | ✓      |        |                      |          |
|                   |               |                  |        |        |                      |          |
| R0.38             | +/-0.030      | R0.380           | ✓      |        |                      |          |
| Ø0.392            | +0.002/-0.000 | Ø0.393           | ✓      |        |                      |          |
| Ø0.201            | +0.005/-0.000 | Ø0.201           | ✓      |        |                      |          |
| 0.268             | +/-0.010      | 0.274            | ✓      |        |                      |          |
| R0.260            | +/-0.010      | R0.260           | ✓      |        |                      |          |
| 0.080             | +/-0.010      | 0.078            | ✓      |        |                      |          |
| 0.300             | +/-0.010      | 0.300            | ✓      |        |                      |          |
| 0.381             | +/-0.010      | 0.381            | ✓      |        |                      |          |
| 0.201             | +/-0.010      | 0.204            | ✓      |        |                      |          |
| 0.580             | +/-0.010      | 0.580            | ✓      |        |                      |          |



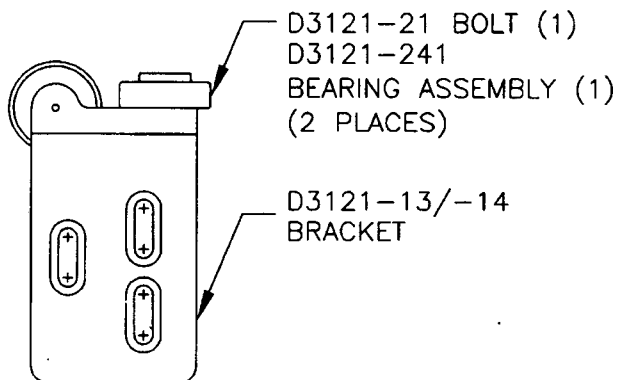
**DART****RELEASED**  
07.11.07

|                  |                |   |                         |
|------------------|----------------|---|-------------------------|
| DESIGN<br>#      | DRAWN BY<br>LE | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA                   |                         |
| CHECKED<br>#     | APPROVED<br>#  | DRAWING NO.<br>D3121  | REV. E<br>SHEET 1 OF 10 |
| DATE<br>07.11.07 |                | TITLE<br>BRACKET ASSEMBLY   | SCALE<br>1:2            |
| A                | 02.04.15       | NEW ISSUE   |                         |
| B                | 03.01.16       | ADD RIDGES; ADD MAT'L PROP; FIX P/N<br>ADD -141/-143/-144/-145/-146 |                         |
| C                | 04.02.17       | ADD CLEARANCE; USE -241 BEARING                                     |                         |
| D                | 06.05.17       | D3121-25 CAP WAS 1.024, NOW 1.000                                   |                         |
| E                | 07.11.07       | ADD TOLERANCE TO 0.032 (DETAIL B)                                   |                         |

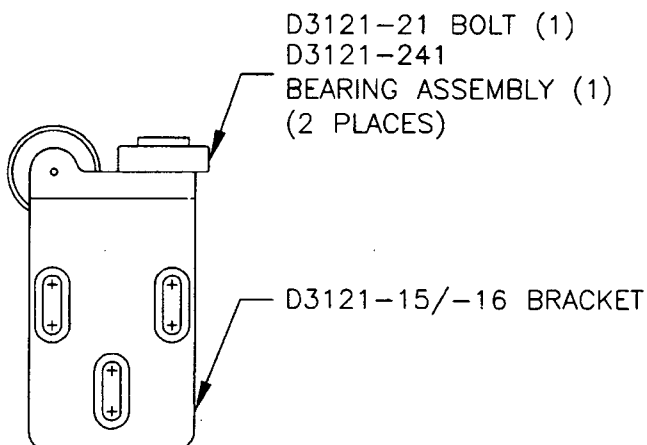


**D3121-041 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-33)

w/o 58767



**D3121-043 (SHOWN) / D3121-044 (OPPOSITE)  
BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-37/-38)



**D3121-045 (SHOWN) / D3121-046 (OPPOSITE)  
BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-35/-36)

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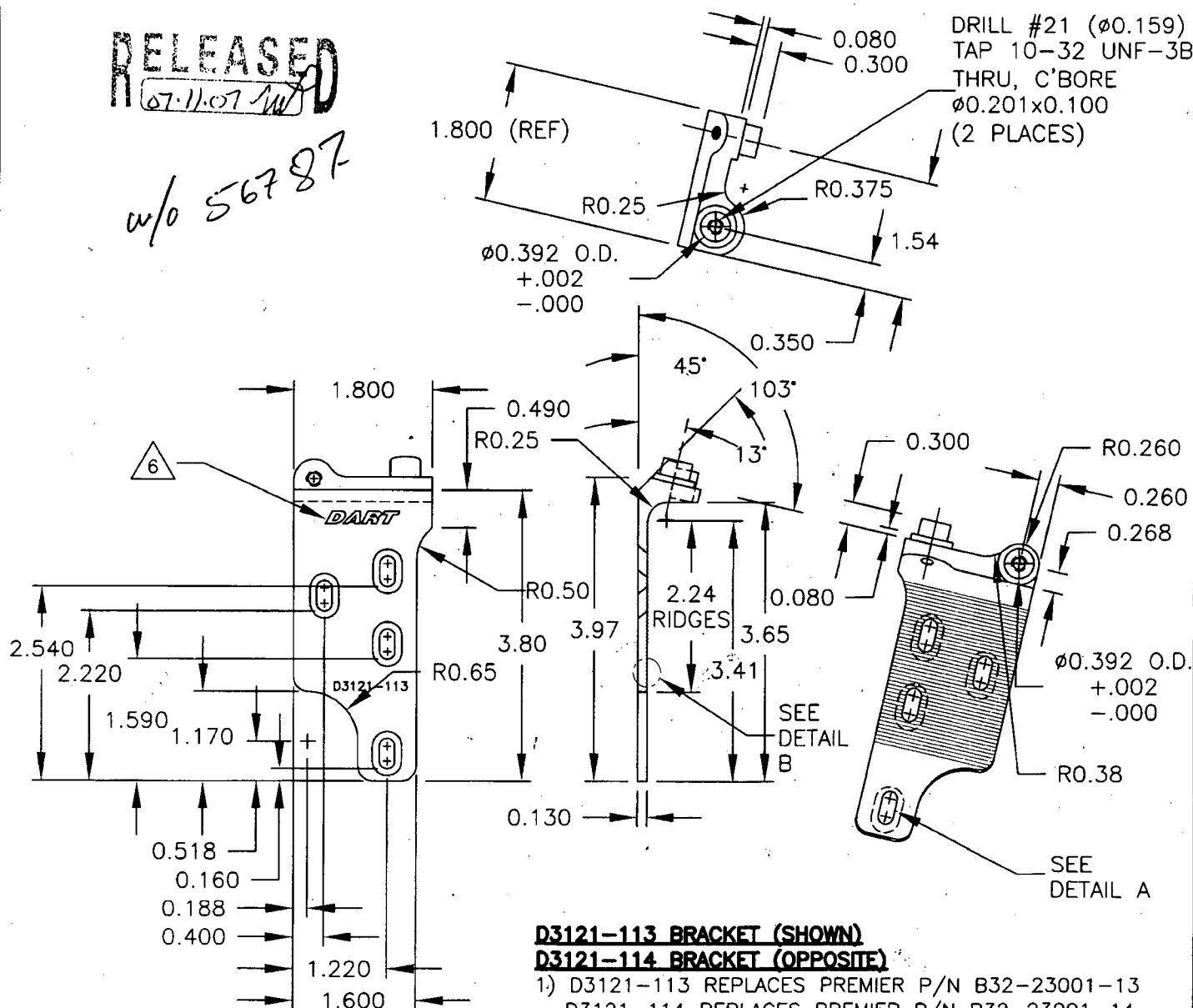
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**DART**

|                  |                |   |                         |
|------------------|----------------|---|-------------------------|
| DESIGN<br>#      | DRAWN BY<br>LE | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |                         |
| CHECKED<br>#     | APPROVED<br>#  | DRAWING NO.<br>D3121                              | REV. E<br>SHEET 8 OF 10 |
| DATE<br>07.11.07 |                | TITLE<br>BRACKET ASSEMBLY                         | SCALE<br>1:2            |

RELEASED  
07.11.07

w/o 56787

**D3121-113 BRACKET (SHOWN)****D3121-114 BRACKET (OPPOSITE)**

- 1) D3121-113 REPLACES PREMIER P/N B32-23001-13  
D3121-114 REPLACES PREMIER P/N B32-23001-14
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE STRENGTH = 150 ksi  
MIN YIELD TENSILE STRENGTH = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

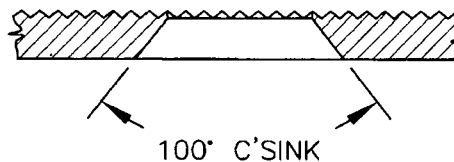
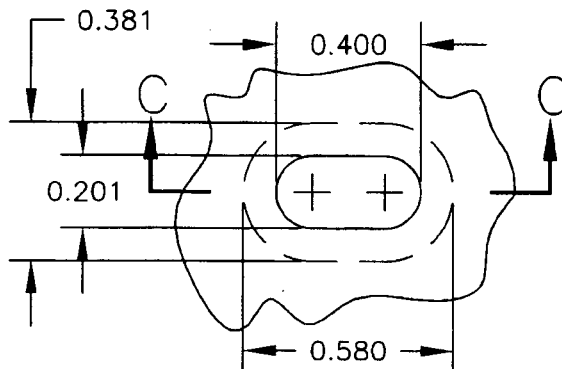
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**DART**

|                  |                |   |                         |
|------------------|----------------|---|-------------------------|
| DESIGN<br>#      | DRAWN BY<br>LE | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |                         |
| CHECKED<br>#     | APPROVED<br>#  | DRAWING NO.<br>D3121                              | REV. E<br>SHEET 3 OF 10 |
| DATE<br>07.11.07 |                | TITLE<br>BRACKET ASSEMBLY                         | SCALE<br>1:1            |

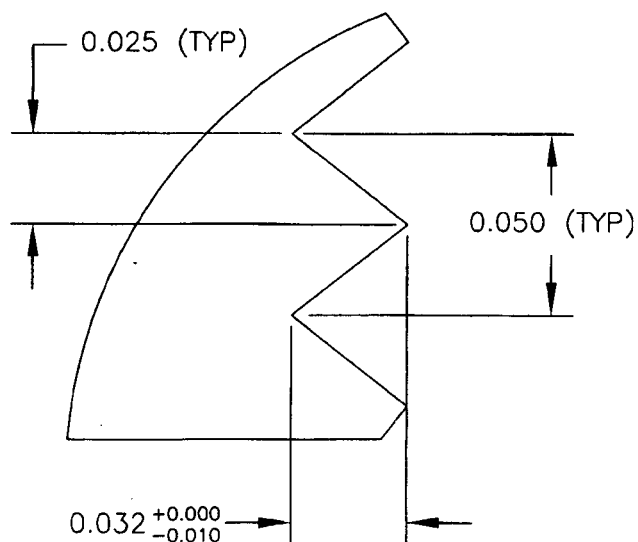
**DETAIL A:**  
**SLOT DETAIL**  
SCALE 2:1  
VIEW ROTATED



**SECTION**  
**C-C**

**RELEASED**  
07.11.07

**DETAIL B:**  
**RIDGE DETAIL**  
PARTIAL SECTION  
SCALE 1:20



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